

SERVICE MANUAL
Level 1&2

NOKIA
C5-00

RM-645



Transceiver characteristics

Band:
HSDPA/HSUPA, WCDMA 900/2100 + GSM/EDGE
850/900/1800/1900

Display:
QVGA (240 x 320 pixels) 2.2" screen up to 16.7 M
colors

Camera:
3.2 Mpix with Full Focus EDOF module

Operating System:
Symbian ver. 9.3

Connections:
Bluetooth wireless technology 2.1 interface
3.5 mm AV connector
Micro A/B USB 2.0 high speed
USB Charger
GPS, Maps 3.0 with Lifecaster

Transceiver with BL-5CT battery pack

| Talk time | Standby |
|----------------------------|----------------------------|
| GSM: 12 hours | GSM: 630 hours |
| WCDMA: 4.9 hours | WCDMA: 670 hours |

Note: Talk times are dependant on network
parameter settings.

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CHANGE HISTORY

| Status | Version No. | Date | Comments |
|----------|-------------|-----------|--|
| Approved | 1.0 | 5.3.2010 | |
| Approved | 2.0 | 25.3.2010 | Updated releasing A-COVER sequence in disassembly. Updated releasing D-COVER sequence in disassembly. |

The purpose of this document is to help NOKIA service levels 1 and 2 workshop technicians to carry out service to NOKIA products. This Service Manual is to be used only by authorized NOKIA service suppliers, and the content of it is confidential. Please note that NOKIA provides also other guidance documents (e.g. Service Bulletins) for service suppliers, follow these regularly and comply with the given instructions.

While every endeavor has been made to ensure the accuracy of this document, some errors may exist. If you find any errors or if you have further suggestions, please notify NOKIA using the address below:

Nokia Care Academy
<mailto:Service.Manuals@nokia.com>

Please keep in mind also that this documentation is continuously being updated and modified, so watch always out for the newest version.

1. COPYRIGHT

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The availability of particular products may vary by region.

IMPORTANT

This document is intended for use by qualified service personnel only.

2. WARNINGS AND CAUTIONS

Please refer to the phone's user guide for instructions relating to operation, care and maintenance including important safety information. Note also the following:

2.1 Warnings

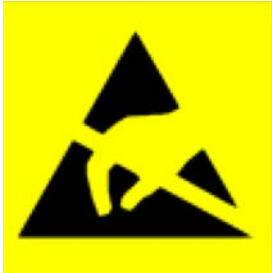
1. CARE MUST BE TAKEN ON INSTALLATION IN VEHICLES FITTED WITH ELECTRONIC ENGINE MANAGEMENT SYSTEMS AND ANTI-SKID BRAKING SYSTEMS. UNDER CERTAIN FAULT CONDITIONS, EMITTED RF ENERGY CAN AFFECT THEIR OPERATION. IF NECESSARY, CONSULT THE VEHICLE DEALER/MANUFACTURER TO DETERMINE THE IMMUNITY OF VEHICLE ELECTRONIC SYSTEMS TO RF ENERGY.
2. THE HANDPORTABLE TELEPHONE MUST NOT BE OPERATED IN AREAS LIKELY TO CONTAIN POTENTIALLY EXPLOSIVE ATMOSPHERES, EG PETROL STATIONS (SERVICE STATIONS), BLASTING AREAS ETC.
3. OPERATION OF ANY RADIO TRANSMITTING EQUIPMENT, INCLUDING CELLULAR TELEPHONES, MAY INTERFERE WITH THE FUNCTIONALITY OF INADEQUATELY PROTECTED MEDICAL DEVICES. CONSULT A PHYSICIAN OR THE MANUFACTURER OF THE MEDICAL DEVICE IF YOU HAVE ANY QUESTIONS. OTHER ELECTRONIC EQUIPMENT MAY ALSO BE SUBJECT TO INTERFERENCE.

2.2 Cautions

1. Servicing and alignment must be undertaken by qualified personnel only.
2. Ensure all work is carried out at an anti-static workstation and that an anti-static wrist strap is worn.
3. Use only approved components as specified in the parts list.
4. Ensure all components, modules screws and insulators are correctly re-fitted after servicing and alignment.
5. Ensure all cables and wires are repositioned correctly

3. ESD PROTECTION

Nokia requires that service points have sufficient ESD protection (against static electricity) when servicing the phone.



Any product of which the covers are removed must be handled with ESD protection. The SIM card can be replaced without ESD protection if the product is otherwise ready for use.

To replace the covers ESD protection must be applied.

All electronic parts of the product are susceptible to ESD. Resistors, too, can be damaged by static electricity discharge.

All ESD sensitive parts must be packed in metallized protective bags during shipping and handling outside any ESD Protected Area (EPA).

Every repair action involving opening the product or handling the product components must be done under ESD protection.

ESD protected spare part packages **MUST NOT** be opened/closed out of an ESD Protected Area.

For more information and local requirements about ESD protection and ESD Protected Area, contact your local Nokia After Market Services representative.

4. CARE AND MAINTENANCE

This product is of superior design and craftsmanship and should be treated with care. The suggestions below will help you to fulfil any warranty obligations and to enjoy this product for many years.

- Keep the phone and all its parts and accessories out of the reach of small children.
- Keep the phone dry. Precipitation, humidity and all types of liquids or moisture can contain minerals that will corrode electronic circuits.
- Do not use or store the phone in dusty, dirty areas. Its moving parts can be damaged.
- Do not store the phone in hot areas. High temperatures can shorten the life of electronic devices, damage batteries, and warp or melt certain plastics.
- Do not store the phone in cold areas. When it warms up (to its normal temperature), moisture can form inside, which may damage electronic circuit boards.
- Do not drop, knock or shake the phone. Rough handling can break internal circuit boards.
- Do not use harsh chemicals, cleaning solvents, or strong detergents to clean the phone.
- Do not paint the phone. Paint can clog the moving parts and prevent proper operation.
- Use only the supplied or an approved replacement antenna. Unauthorised antennas, modifications or attachments could damage the phone and may violate regulations governing radio devices.

All of the above suggestions apply equally to the product, battery, charger or any accessory.

5. BATTERY INFORMATION

Note: A new battery's full performance is achieved only after two or three complete charge and discharge cycles! The battery can be charged and discharged hundreds of times but it will eventually wear out.

When the operating time (talk-time and standby time) is noticeably shorter than normal, it is time to buy a new battery. Use only batteries approved by the phone manufacturer and recharge the battery only with the chargers approved by the manufacturer.

Unplug the charger when not in use. Do not leave the battery connected to a charger for longer than a week, since overcharging may shorten its lifetime.

If left unused a fully charged battery will discharge itself over time. Temperature extremes can affect the ability of your battery to charge.

For good operation times with Ni-Cd/NiMH batteries, discharge the battery from time to time by leaving the product switched on until it turns itself off (or by using the battery discharge facility of any approved accessory available for the product).

Do not attempt to discharge the battery by any other means. Use the battery only for its intended purpose.

Never use any charger or battery which is damaged.

Do not short-circuit the battery. Accidental short-circuiting can occur when a metallic object (coin, clip or pen) causes direct connection of the + and - terminals of the battery (metal strips on the battery) for example when you carry a spare battery in your pocket or purse. Shortcircuiting the terminals may damage the battery or the connecting object.

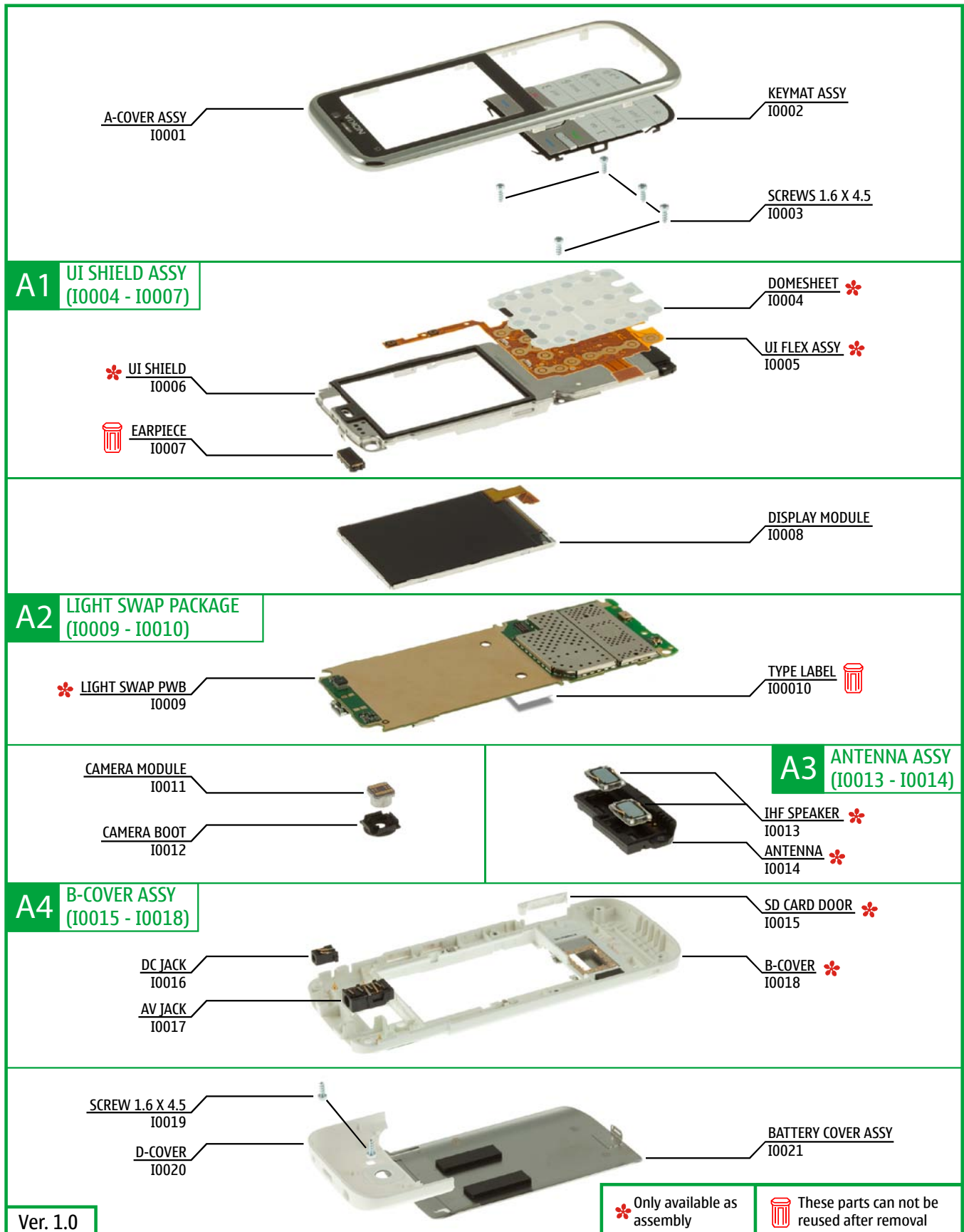
Leaving the battery in hot or cold places, such as in a closed car in summer or winter conditions, will reduce the capacity and lifetime of the battery. Always try to keep the battery between 15°C and 25°C (59°F and 77°F).

A phone with a hot or cold battery may temporarily not work, even when the battery is fully charged. Batteries' performance is particularly limited in temperatures well below freezing.

Do not dispose batteries in a fire! Dispose of batteries according to local regulations (e.g. recycling).

Do not dispose as household waste.

6. EXPLODED VIEW



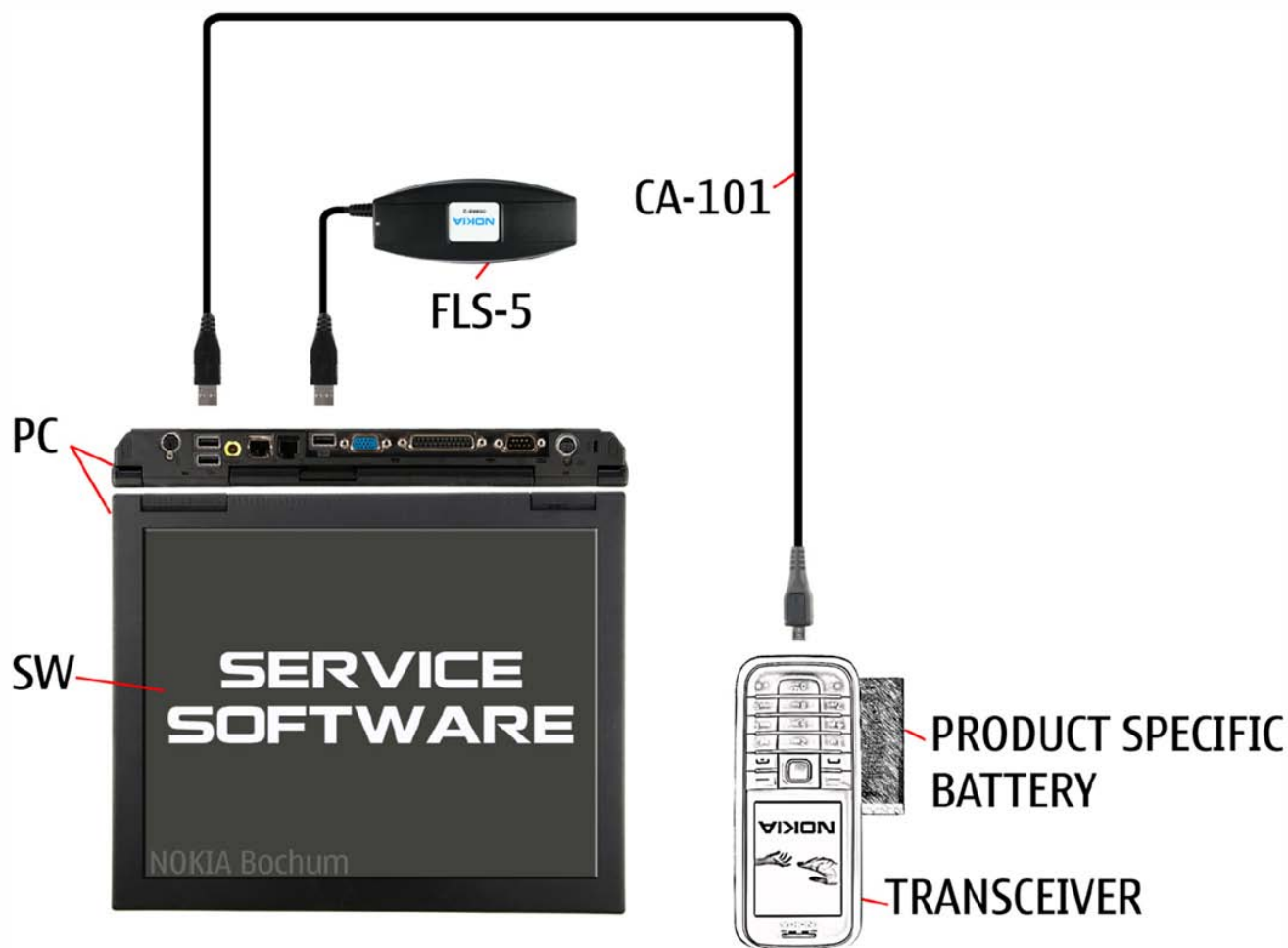
7. SERVICE DEVICES

| | | |
|--|---|--|
|  <p>FLS-5</p> <p>FLS-5 Flash Device</p> |  <p>CA-101 100cm</p> <p>CA-101 Service Cable</p> |  <p>AC-3 Travel Charger</p> |
|  <p>BL-5J Battery</p> |  <p>SS-88 Camera removal tool</p> |  <p>NMP standard toolkit (v2) For more information, refer to the Service Bulletin (SB-011) on NOKIA Online. Supplier or manufacturer contacts for tool re-order can be found in “Recommended service equipment” document on NOKIA Online.</p> |

8. SW-UPDATE

Flash concept - (Point of Sales)

To use the FLS-5 Flash Dongle, follow the user guide inside the sales package.
Please check always for the latest version of flash software, which is available on Nokia Online.



For further information please refer to the corresponding "Service Concept e-learning" on NOL!

9. DISASSEMBLY INSTRUCTIONS



1) Nokia C5-00 disassembly.



2) You must use the Nokia Standard Toolkit version 2. You will also need SS-88 camera removal tool, an AV plug and a DC plug.



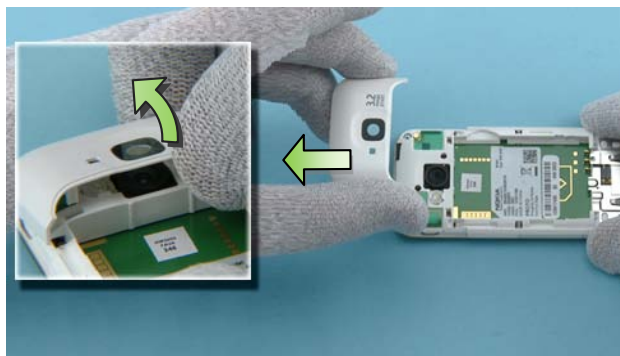
3) Use the BATTERY COVER RELEASE BUTTON to open the BATTERY COVER.



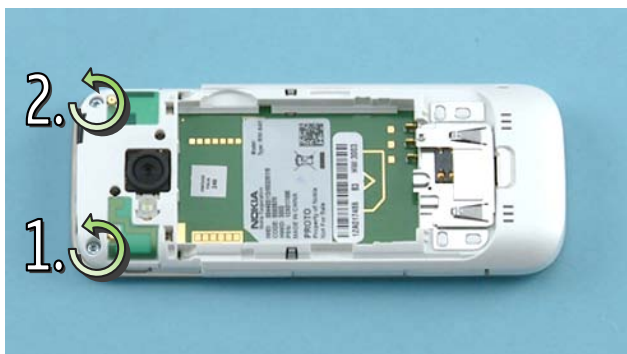
4) Slide the SS-93 to direction shown to release clip on the other side. Be careful not to push the SS-93 more than 3mm in and damage the CAMERA MODULE.



5) Place the SS-93 between the B-COVER and D-COVER and slide to the direction shown to release the second clip. Be careful not to push the SS-93 more than 3mm in.



6) Lift up the D-COVER as shown in the small picture. Then pull it away from the B-COVER and remove it.



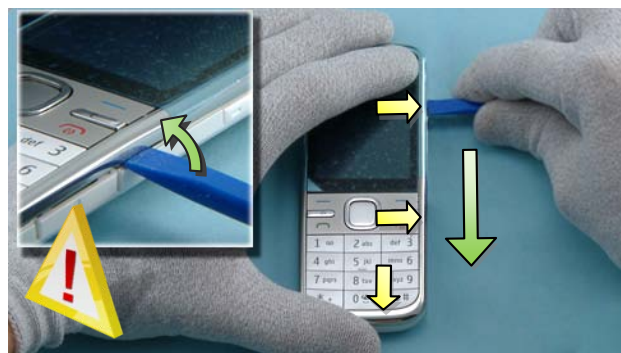
7) Unscrew the two TORX+ size 6 screws in the order shown.



8) Insert the SS-93 between the A-COVER ASSY and the B-COVER on the left side of the device. Carefully lever the B-COVER outwards to release the clips holding the A-COVER ASSY.



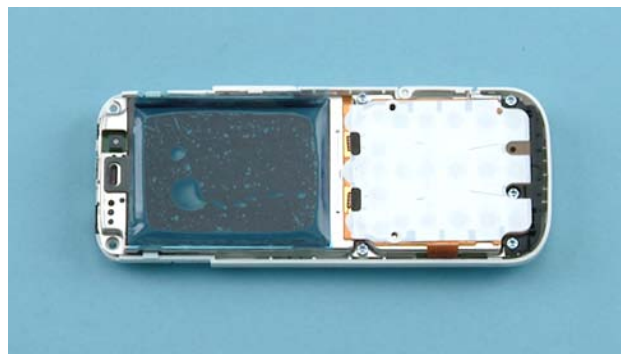
9) Move along the edge of the device towards the bottom end and carefully detach the clips.



10) By using the same procedure as before, very carefully detach the clips on the right side of the device. Start from top and move towards bottom end.



11) Remove the A-COVER ASSY.



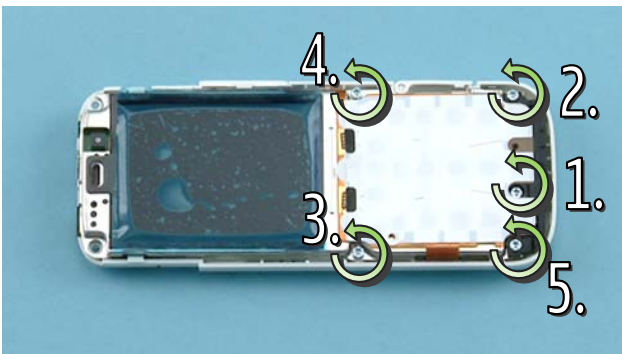
12) Protect the LCD with a protective film.



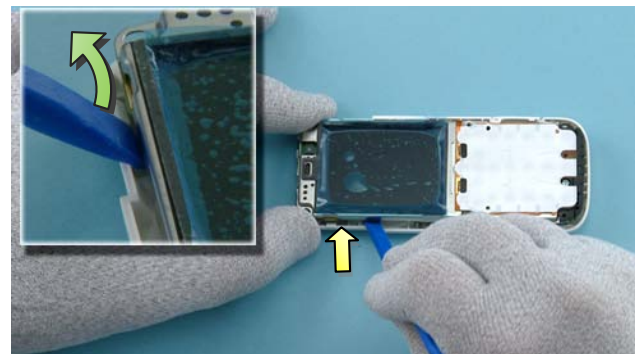
13) Press out the KEYMAT ASSY from the A-COVER ASSY.



14) Remove the KEYMAT ASSY.



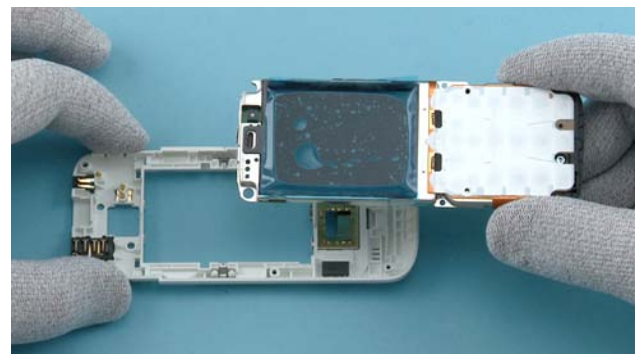
15) Unscrew the four TORX+ size 6 screws in the order shown.



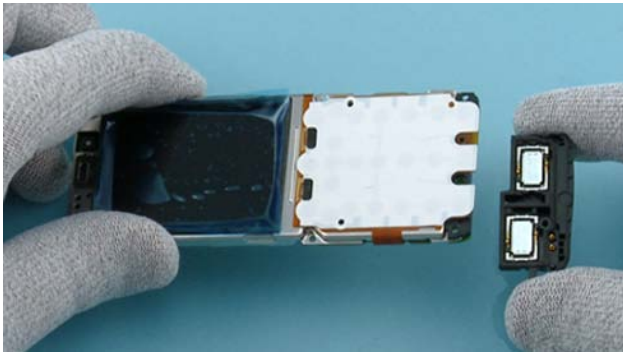
16) To release the engine board, open the first shown clip holding the B-COVER ASSY with the SS-93.



17) Open the second shown clip of the B-COVER ASSY.



18) Lift up the PWB together with UI SHIELD, LCD and ANTENNA.



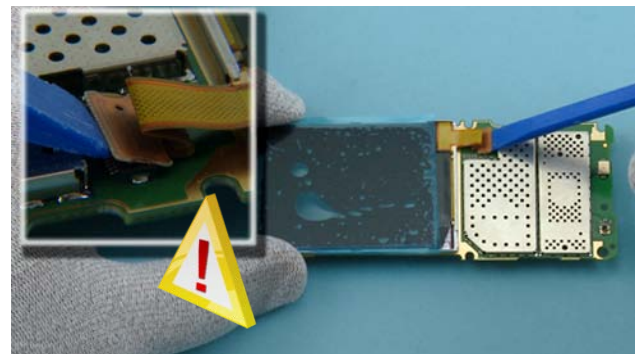
19) Remove the ANTENNA.



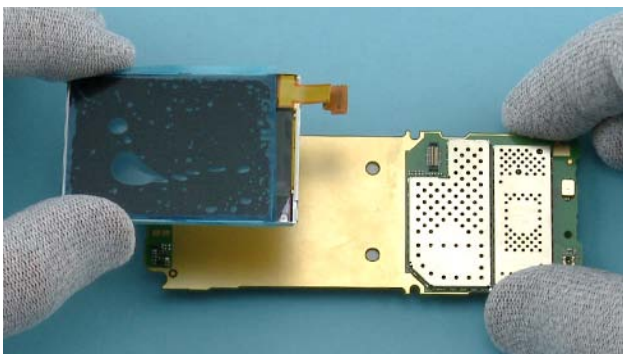
20) Use the SS-93 to open the UI CONNECTOR.
Be careful not to damage the connector or the components nearby!



21) Remove the UI SHIELD ASSY.



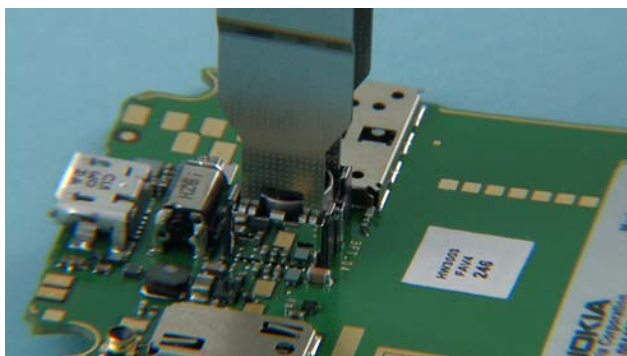
22) Use the SS-93 to open the LCD CONNECTOR.
Be careful not to damage the connector!



23) Remove the LCD.



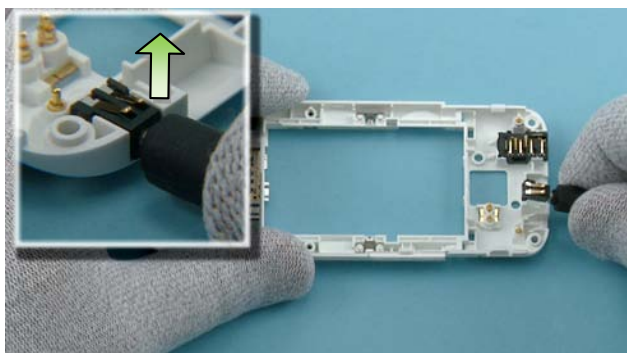
24) Use the tweezers to remove the CAMERA BOOT.



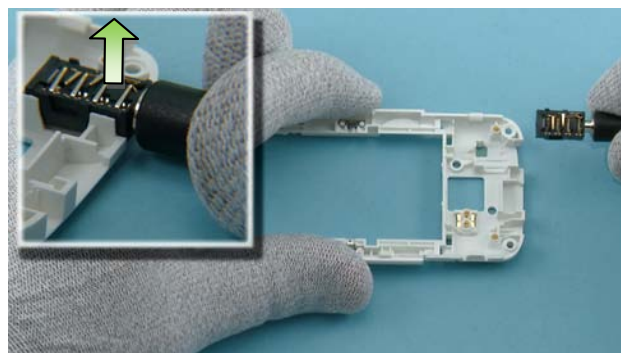
25) Use the camera removal tool SS-88, to detach the CAMERA.



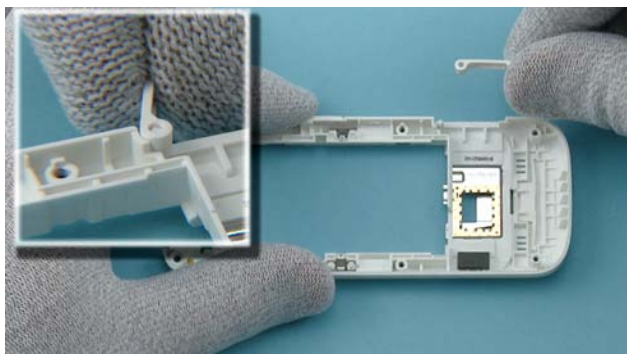
26) Lift up the SS-88 and remove the CAMERA.



27) Use a DC plug to lift up and remove the DC JACK.



28) Use an AV plug to lift up and remove the AV JACK.



29) Remove the SD CARD DOOR.



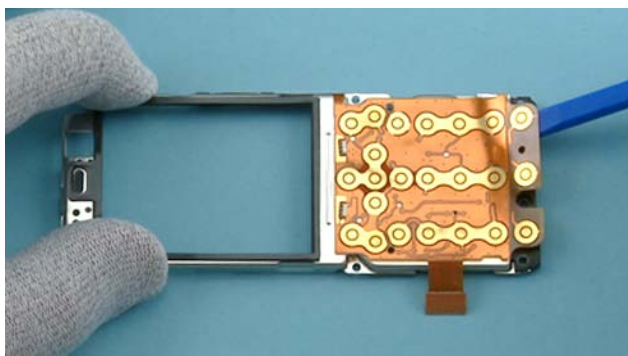
30) Use the dental tool to lift up the EARPIECE. Be aware of the sharp point of the dental tool – be careful not to injure yourself!



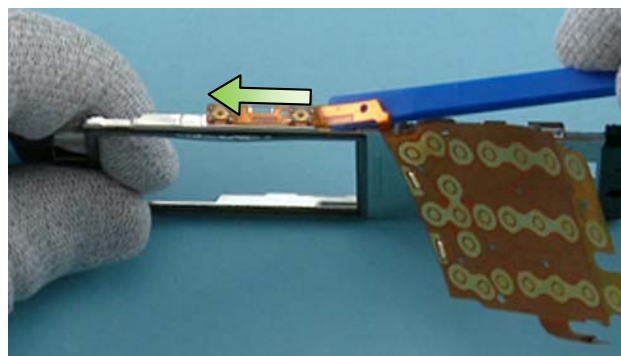
31) Remove the EARPIECE using tweezers. Do not use it again.



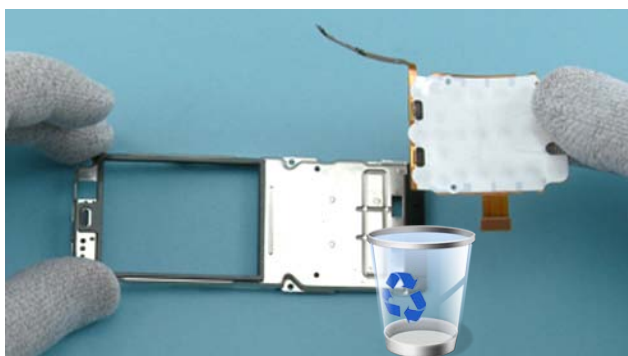
32) Use the dental tool to lift up one corner of the DOMESHEET ASSY. Peel off and remove the DOMESHEET ASSY. Do not use it again.



33) Use the SS-93 to release the UI FLEX ASSY from the UI SHIELD.



34) Continue to release the UI FLEX ASSY in the direction shown.



35) Remove the UI FLEX ASSY. Do not use it again.



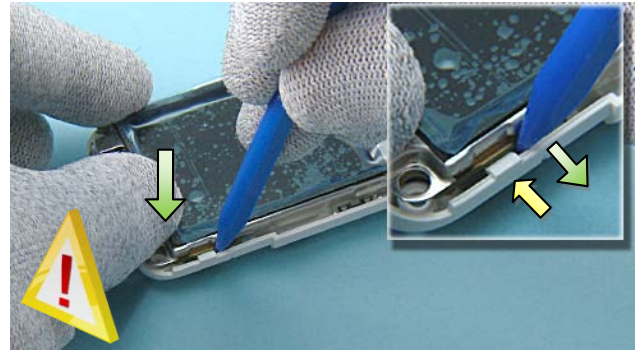
36) Nokia C5-00 disassembly is now complete.

-END OF DISASSEMBLY-

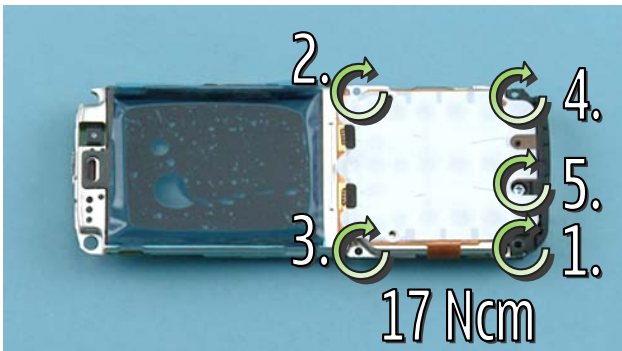
10. ASSEMBLY HINTS



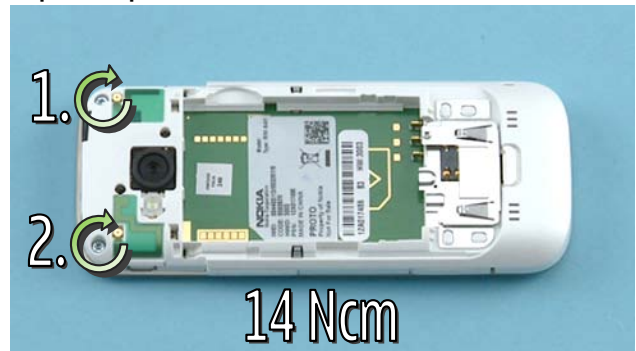
1) Place the top right corner of the UI SHIELD ASSEMBLY like shown in to the B-COVER. Carefully place the UI SHIELD ASSEMBLY under the shown clip.



2) Lower down the left side of the UI SHIELD ASSEMBLY. Very carefully press down the UI SHIELD ASSEMBLY near the clip. Use the sharp end of the SS-93 to pull away the B-COVER and place the shown clip on top of the UI SHIELD ASSEMBLY.



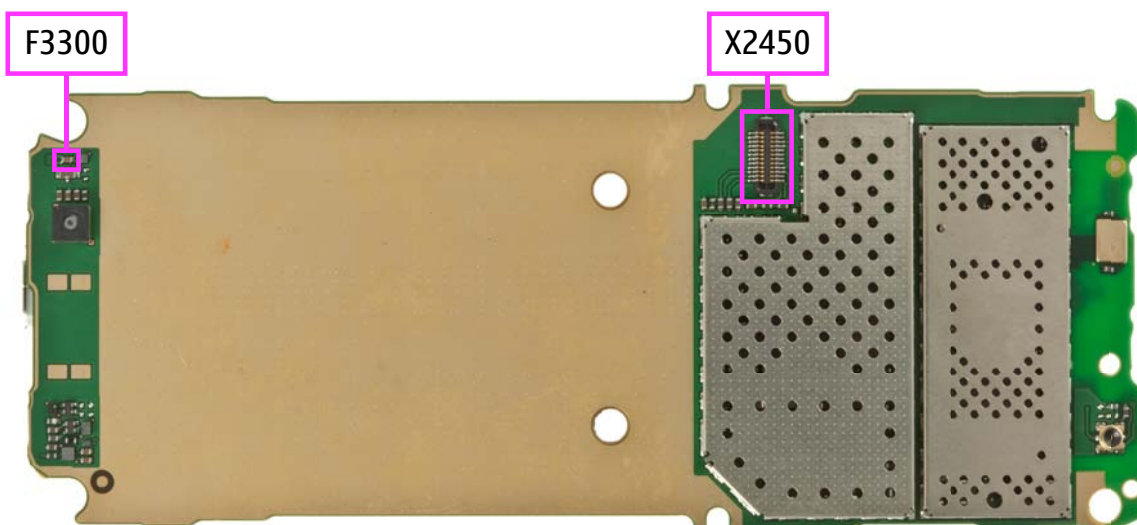
3) Tighten the screw to the torque of 17 Ncm in the order shown.



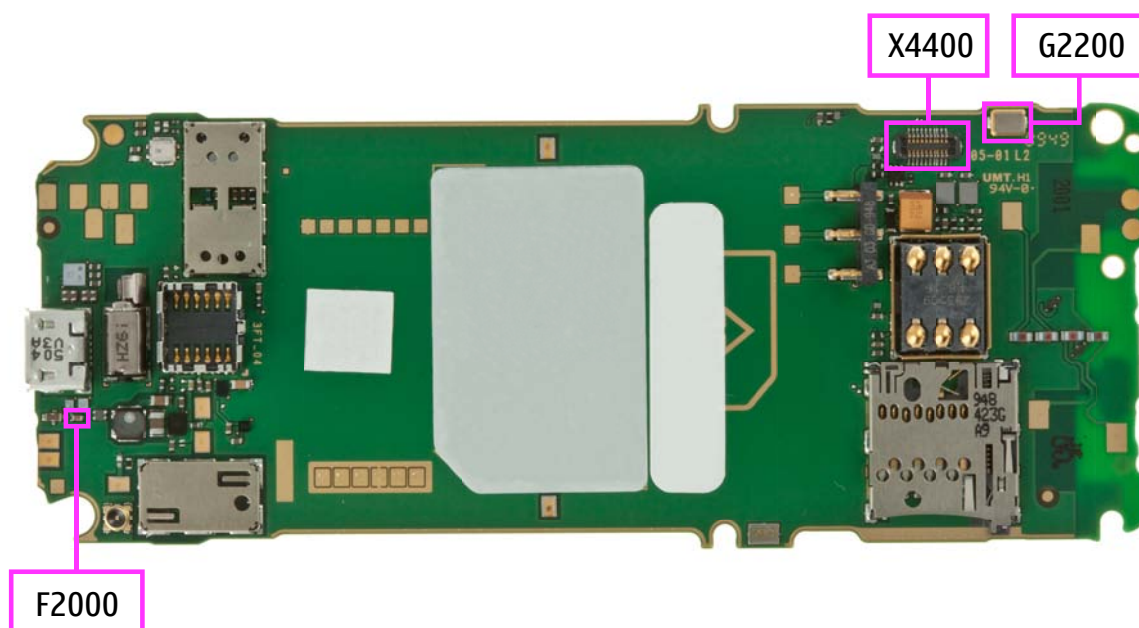
4) Tighten the two screws to the torque of 14 Ncm in the order shown.

11. SOLDER COMPONENTS

TOP



BOTTOM



Ver. 1.0